

Using the Five Practices to Support Teachers and Effective Teaching



Peg Smith
University of Pittsburgh

Agenda

- Review the five practices
- Engage in a subset of the five practices
- Discuss how the five practices might be helpful in your work as a teacher or supporting other with teachers

Agenda

- Review the five practices
- Engage in a subset of the five practices (planning, observing, discussing)
- Discuss how the five practices might be helpful in your work as a teacher or supporting other with teachers

The Five Practices (+)

0. Setting Goals and Selecting Tasks

1. **Anticipating** (e.g., Fernandez & Yoshida, 2004; Schoenfeld, 1998)

2. **Monitoring** (e.g., Hodge & Cobb, 2003; Nelson, 2001; Shifter, 2001)

3. **Selecting** (e.g., Lampert, 2001; Stigler & Hiebert, 1999)

4. **Sequencing** (e.g., Schoenfeld, 1998)

5. **Connecting** (e.g., Ball, 2001; Brendehur & Frykholm, 2000)

Monitoring Tool

Strategy	Who and What	Order

Ways to Use the 5 Practices to Improve Practice and Support *Effective Teaching*

- Co-plan lessons using the five practices as a framework and create a monitoring sheet to be used during the lesson
- Observe and debrief lessons using the monitoring sheet that was co-constructed during the planning session

Agenda

- Review the five practices
- Engage in a subset of the five practices
- Discuss how the five practices might be helpful in your work as a teacher or supporting other with teachers

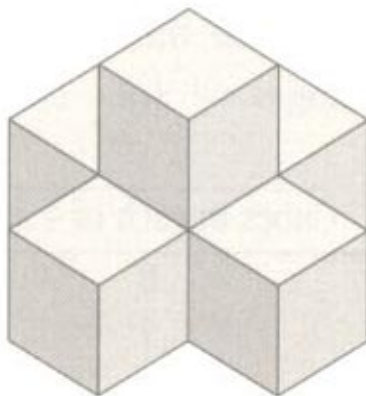
Goal

- Write an algebraic rule that describes the relationship between the two quantities (F-BF-1);
- Recognize that symbolic expressions that emerge from the same visualization are equivalent (F-IF-8); and
- Interpret key features of graphs, tables and equations and the relationships between and among these representations (F-IF-4).

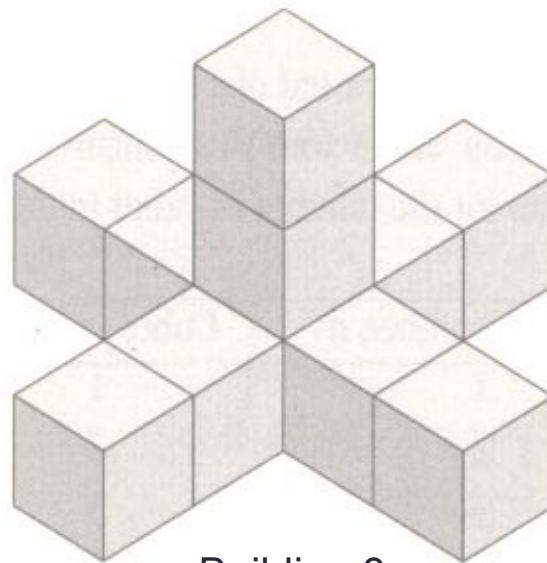
Counting Cubes Task



Building 1



Building 2



Building 3

- Describe a pattern you see in the cube buildings.
- Use your pattern to write an expression for the number of cubes in the n^{th} building.
- Use your expression to find the number of cubes in the 5th building. Check your results by constructing the 5th building and counting the cubes.
- Look for a different pattern in the buildings. Describe the pattern and use it to write a different expression for the number of cubes in the n^{th} building.

Anticipating Likely Responses

- Working individually, consider the correct and incorrect approaches that students might use to solve this task
- Working with your group, share the approaches you have anticipated so far and see what other approaches you can come up with together
- Make a list of the approaches you come up

Monitoring Actual Responses

- Which responses might you be on the look out for as you walk around the room and interact with students? Why?
- Use the monitoring sheet to create a tool to use during the lesson.

Monitoring Tool

Strategy	Who and What	Order
$C = 5n - 4$ From <u>Table</u> From Visual		
$C = 4(n-1) + n$		
$C = 5(n-1) + 1$		
Recursive $C = \# \text{ of cubes in previous building} + 5$		
<u>Graph</u>		
Other		

Monitoring in Peter Dubno's Classroom

Strategy	Who and What	Order
$C = 5n - 4$ From Table From Visual	<i>Cassie's Group (n is the building number)</i>	
$C = 4(n-1) + n$		
$C = 5(n-1) + 1$ $C = 1 + 5(n-1)$	<i>Cody's Group (n is the building number)</i> <i>Arenna's Group (n is stage of building)</i>	
Recursive $C = \# \text{ of cubes in previous building} + 5$		
Graph		
Other $5n + 1$ $5y + 1$	<i>Arden's Group (n is length of the arms)</i> <i>Zack 1's Group (y=stage of building -1)</i>	

Selecting, Sequencing and Connecting

- Imagine that you used your monitoring sheet while students were working in small groups on the counting cubes task. When you were finished monitoring, you had compiled the data shown on the yellow sheet.
- Which solutions would you ask students to present and in what order?
- What questions might you ask to help students make connections between and among solutions and to the key ideas that you were targeting in the lesson?

Counting Cubes Lesson

Teacher: Peter Dubno

The Lab School - Grade 8
New York City Community School District 2
December 1998

In this segment eighth grade students are explaining how they and their groups solved the counting cubes task.

Counting Cubes Lesson

- As you watch the discussion, consider:
 - To what extent did the discussion focus on the goals of the lesson.
 - To what extent did the selection and sequence of student solution support or inhibit reaching the lesson goals.
 - To what extent did the teacher connect different solutions and highlight key ideas.

Counting Cubes

Peter Dubno

12:41

institute for

learning

UNIVERSITY OF PITTSBURGH

Debriefing

- What would you want to talk with Mr. Dubno about following the lesson?
- To what extent could the monitoring sheet, and the data you collected during the lesson, help in discussing the lesson?

Agenda

- Review the five practices
- Engage in a subset of the five practices
- Discuss how the five practices might be helpful in your work as a teacher or supporting other with teachers

The End

Thank You!



Peg Smith
pegs@pitt.edu

Counting Cubes - Table

Building Number	Number of Cubes
1	1
2	6
3	11
4	16
5	21
6	26
7	31
8	36
9	41

Counting Cubes - Table

Building Number	Number of Cubes
1	1
2	6
3	11
4	16
5	21
6	26
7	31
8	36

$C = 5n - \text{something}$

Counting Cubes - Table

Building Number	Number of Cubes
0	-4
1	1
2	6
3	11
4	16
5	21
6	26
7	31
8	36

$$C = 5n - 4$$

Counting Cubes - Graph

